eGranary Digital Library: Bridging the Digital Divide in Zambia

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Challenges to Accessing Information:

The term **"digital divide"** is used to refer to the phenomena of unequal access to information and communication technologies. In this case, a divide exists between wealthy and low-income countries as well as those who have and don't have access within a country. Certainly, while people in industrialized countries are easily able to access free health information online, the same information is not so "freely" accessible by those who can benefit from it most, including health sciences students, faculty, and practitioners in developing countries. The digital divide is complex and multifaceted, and is compounded by a multitude of social, political, economic and electronic barriers and must be framed in context.

Structural Barriers:

Developing countries face countless infrastructural constraints. In countries such as Zambia, the following barriers may be encountered when trying to access electronic information online:

- Unreliable, slow or lack of Internet connectivity
- Limited access to a computer
- Limited finances to pay for Internet
- Blackouts (known as "loadshedding")

Knowledge Barriers:

Due to many of the structural barriers listed above, health professionals and students in developing countries have basic or limited computer information skills, including:

- Limited digital/computer and health information literacy skills
- Limited skills in information technology
- Lack of knowledge about available resources

Overcoming the Digital Divide:

In order to promote electronic information access in developing countries, strategies must work to address the numerous constraints that compound the digital divide. Effective courses of action may include:

- Hosting educational and capacity building workshops and capacity building projects to strengthen digital literacy, health information literacy and technological skills
- Providing health institutions, universities and research centers with expanded and alternative access to health information (such as the e-Granary).
- Engage in advocacy with civil society, government and health institutions to promote access and use
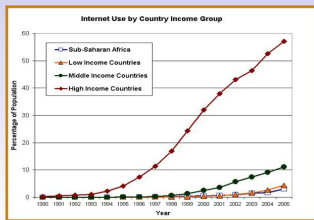
Summary Points:

- Information and communication technologies can encourage capacity building efforts of health professionals to inform policy, research agendas and clinic practice.
- Key challenges inhibiting equitable health information access, including inadequate Internet infrastructure, high cost of access, and limited information and computer literacy, persist in many developing countries.
- The multifaceted barriers to electronic information access must be considered to design effective intervention strategies for health and information professionals.

For More Information, visit:

http://www.sparkmancenter.org/egranary
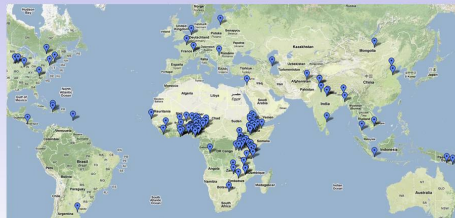
Challenges to Accessing Information

For most health care professionals in the developing world, the Internet represents an expensive, unreliable, and oftentimes impossible method to access digital health resources. Zambia's Internet connectivity is among the most expensive in the world. As high as $6000 USD per MB, this is twice as much as other locations in Africa.

Internet Use by Country Income Group

Internet uptake in sub-Saharan Africa is about 2%, and the existing bandwidth is often so slow that many users avoid large files like PDFs, video, and audio.

How Does the eGranary Work?

The eGranary Digital Library can provide thousands of networked computers high-speed access to millions of documents and multimedia files over a local area network.

Even when the Internet connection is broken!

The eGranary Digital Library – "The Internet in a Box" – provides access to over 14 million Internet resources. Through a process of mirroring Web sites (with permission) and delivering them to partner institutions in developing countries, the eGranary delivers instant access to a wide variety of educational resources including video, audio, books, journals, and software. With its catalog and built-in search engine, the eGranary appears to the end-user to be just like the Internet, only faster.

Where is the eGranary?

The eGranary is already installed in more than 300 schools, hospitals, clinics, and universities in Africa, India, Bangladesh, and Haiti.

What Health Information is Currently in the eGranary?

Amongst the 1,200 Web sites included in the eGranary are those of the World Health Organization, the Centers for Disease Control, the Hesperian Foundation, the Mayo Clinic Proceedings, and hundreds of open source health-related journals.

Health Care Training in Zambia

In conjunction with the Sparkman Center for Global Health at the University of Alabama at Birmingham and colleagues at universities in Zambia, we have participated in identifying, collecting, cataloging, and developing collections for teaching medicine, nursing and midwifery, and public health.
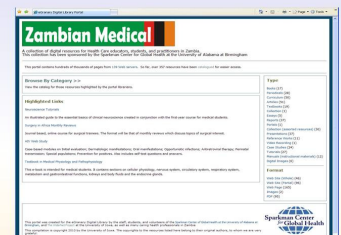

Portals and Workshops

Having access to information is one thing. Being able to use it well to meet a specific mission is another.

By organizing sets of information into user-friendly interfaces, using schema that are already well-understood – like course curricula – we are attempting to reduce the time and effort required to integrate digital resources into the educational milieu.
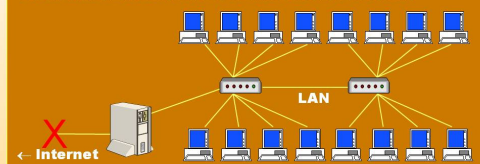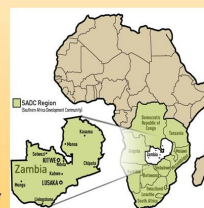
Thousands of resources have been added to the eGranary and hundreds of these have been mapped to the curricula of our partner institutions.

After conducting several training workshops in the Zambia in 2009 and 2010, we have identified ongoing challenges. Most critical, to promote wide scale technology adoption and information literacy, local champions need to be identified and empowered to demonstrate best practices and train others.

The biggest barriers: Lack of technical support and general lack of end user exposure to computers.